ABSTRACT OF THE DISCLOSURE

A method for manufacturing a bidirectionally vertical motion actuator includes the steps of: providing a silicon-on-insulator (SOI) wafer, which comprises a first silicon wafer, an insulation layer on a top surface of the first silicon wafer, and a second silicon wafer; forming a dielectric layer on the SOI wafer by way of deposition; depositing a conductive layer on the dielectric layer; etching the conductive layer, the dielectric layer and the second silicon wafer simultaneously to form a proper top trench; and forming an anisotropic etching groove on a backside of the SOI wafer. A bidirectionally vertical motion actuator formed using the method is also disclosed.